DOCUMENT RESUME

ED 274 378 IR 051 699

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TITLE Evaluating a Library Instruction Program: A Case Study of Effective Intracampus Cooperation.
PUB DATE [83]
NOTE 16p.
PUB TYPE Viewpoints (120) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Class Activities; College Faculty; *College Libraries; Cooperation; Formative Evaluation; Higher Education; Librarians; *Library Instruction; Needs Assessment; Program Effectiveness; *Program Evaluation; Student Needs; *User Needs (Information)
IDENTIFIERS Course Integrated Library Instruction; *Research Courses; *State University of New York Coll at Oswego

ABSTRACT

A variety of resources is needed to effectively carry out a comprehensive evaluation of any reasonably complex program of library instruction. At the State University College at Oswego, New York, the means and motivation for carrying out formal evaluation of a college library's instruction program were greatly enhanced when librarians cooperated with a campus research course. The library's program became a class project; faculty and staff shared their expertise; and these symbiotic efforts resulted in a fairly comprehensive evaluation project. The total evaluation process has included a faculty needs assessment, evaluation of current library instruction offered through freshman English and upper-level psychology courses, and feedback from graduating students. The research results have prompted improvements in the library instruction program, and they form a basis for continuing evaluation. This case study suggests that librarians look to their campus environments for stimulus and help, since colleges are usually rich in resources needed for program evaluation. (Author/KM)

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Evaluating a Library Instruction Program:

A Case Study of Effective Intracampus Cooperation

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IR051699

Abstract

The means and motivation for carrying out formal evaluation of a college library's instruction program were greatly enhanced when librarians cooperated with a campus research course. The library's program became a class project; faculty and staff shared their expertise; and these symbiotic efforts resulted in a fairly comprehensive evaluation project. The research results have prompted improvements in the library instruction program, and they form a basis for continuing evaluation. This case study suggests that librarians look to their campus environments for stimulus and help, since colleges are usually rich in resources needed for program evaluation.

The task of obtaining useful evaluative information for the planning, implementation, and further development of library instruction programs is challenging and rewarding. This paper presents a brief case study of efforts to develop a reasonably comprehensive evaluation of the library instruction program at SUNY College at Oswego. In this account we outline how librarians, a psychology faculty member and his students, and a member of the student services staff used widely available resources to carry out the evaluation from planning through data analyses. We briefly describe our instructional program and the procedures used in the various components of our evaluation effort, highlight salient results and how they have been useful thus far, and summarize the process through which this example of successful intracampus cooperation evolved. Our intent is to encourage similar (perhaps better) efforts at ongoing program evaluation of library instruction.

DESCRIPTION OF COLLEGE

The State University College at Oswego, New York is one of 14 SUNY colleges of arts and science. The college, located on the shore of Lake Ontario, serves students from all areas of the state, including the New York City area. There are approximately 8000 full and part-time undergraduate students and 600 graduate students enrolled in the college. While there is a wide variety of academic programs, the most popular programs include business administration (26%), education (12%), social and behavioral sciences (11%), and computer science (6%). The college is selective in its admissions policies and more than 25% of its graduates enter graduate or professional schools.

LIBRARY INSTRUCTION PROGRAM AT OSWEGO

The library instruction program at Oswego is just over ten years old. It presently reaches close to 4000 students a year on three different levels, involving thirteen librarians.

Basic instruction for freshmen is met through English 102, a composition class required of almost all freshmen. During the writing of their research papers, students come with their classes to the library for two sessions dealing with use of overview articles, subject access to the card catalog, and use of periodical indexes.

Upper-level instruction is provided through about a hundred classes a year, representing seventeen departments. These classes concentrate on locating professional literature, using advanced library tools for the discipline, and knowing when to utilize interlibrary loan and data-base searching. An upper-level elective library course is the third level.

PROCESS

A variety of resources is needed to effectively carry out a comprehensive evaluation of any reasonably complex program of library instruction. These resources typically coexist in the college environment of such instructional programs. Needed are skills, knowledge, and direct involvement in the areas of library instruction, instructional development, measurement and testing, research design, statistics and computation, and organizational change. The trick appears to be to identify and enlist people who can get the job done in a spirit of complementary interdependence.

Our evaluation project was initiated when Mignon Adams mentioned her interest in program evaluation to Mark Morey, who was scheduled to teach a course in program evaluation that semester. Mignon decided to sit in on the

course. Soon the development of an evaluation project for Penfield Library's instructional programs became the applied class project for the course.

Everyone involved was pleased. The students in the class (six undergraduates and two graduate students) were excited by the prospect of contributing to the development of a project which was clearly going to be continued and utilized. The library instruction staff, notably Mignon Adams and Mary Loe, was pleased and encouraged at the prospect of assistance in initiating an evaluation project. And Mark was happy to have a class project that fit into his course and held promise for utilization.

Much of the planning and development of the project took place in the context and assignments of the program evaluation course. As the course progressed the library instruction project provided relevant examples and concrete tasks for the students. Everyone involved with the class contributed in some way to every part of the process, but individual students or teams of students were given primary "ownership" for each component of the library instruction program. Lively discussions and true experiential learning resulted as class participants tried to clarify program goals, identify sources of information, and develop measurement devices and research procedures.

By the end of the class a great deal of work had been done in planning a needs assessment, evaluation of the freshman level and our upper-level course, and a summary evaluation. Since that time the authors of this paper have been primarily responsible for the continued planning, implementation, and utilization of the legacy of that initial semester. Even now the various parts of the evaluation project are at different stages of develop-

ment and utilization, and progress continues at a steadily uneven pace.

Each of us has played a variety of roles in this project, and while we have shared tasks we have also relied on our different interests and competencies. One example of this is Bob Schell's skillful manipulation of the Statistical Package for the Social Sciences (SPSS), an extremely useful computer package for the management, analysis, and reporting of statistical information. Currently, responsibility for the evaluation project primarily belongs to Mignon, Mary, and the library staff. Mark and Bob still participate as collaborators and consultants.

THE FACULTY NEEDS ASSESSMENT

In a needs assessment, members of key groups (such as students, faculty members, librarians, and administrators) are asked to respond with their perceptions of what needs are and how they should be met. Ideally, a needs assessment is done when a program is being established. Like most instruction programs, however, the one at SUNY/Oswego just grew without ever receiving a formal response from Oswego faculty.

Procedure

In the spring of 1982, a questionnaire was developed and sent through campus mail with a cover letter to the 290 Oswego full-time faculty. A subsequent reminder was sent to department chairs two weeks later; 156 faculty members responded.

Measure

The 14-item questionnaire was designed to ask faculty if they felt students needed library instruction, who should teach library skills, and whether they were familiar with the instruction program. Faculty were asked to respond to each item using a 5-point scale of strongly agree to strongly

disagree. Computer center staff coded the responses. The results were quantified in terms of percentages marking each answer. A factor analysis allowed us to identify how items related to one another.

Results and Discussion

In general, we found our faculty in strong agreement that college students do not enter college knowing how to use a library, but that they definitely need that knowledge while in college.

There was less certainty that proficiency was attained by graduation--less than 5% strongly agreed, with about 40% agreeing and 40% undecided.

Who should teach them? When similar needs assessments have been done on other campuses, there has sometimes been a response that only college teachers should be teaching library use, while librarians ought to be minding the store. Eighty-five per cent of our responding faculty indicated that library instruction was an appropriate job for a librarian, with 13 taking the time to write in that they felt it should be a joint responsibility of both faculty member and librarian. We like to think that this response was due to our active instruction program.

Several of the significant correlations suggested an interesting conclusion. Those faculty who thought that undergraduate students needed to use a library effectively tended also to be those who thought librarians were the appropriate ones to teach them.

The responses from the various academic departments were compared. In general, faculty from those departments whose students use the library most regularly tended to respond more positively to library instruction.

The questionnaire demonstrated that the faculty responding were indeed supportive of the instruction program as carried out by the librarians, and

that they viewed library skills as essential. Since the return of the questionnaires and the positive responses and comments were higher from the departments with which the library had worked most closely, we realized again the importance of faculty and library cooperation and the close relationships we have developed.

THE ENGLISH 102 PROGRAM EVALUATION

In the seventies library instruction for freshman composition (English 102) grew in tandem with renewed interest in writing skills. Evaluation of the library sessions was done via a mix of observation, attitudinal questionnaires, solicited comments from the English faculty, and a limited type of post-test. By 1980, when the composition course became a requirement, 95% (or 66) of the sections had incorporated the library sessions into their coursework. With that degree of cooperation and the happy coincidence that students were randomly assigned to fall or spring sections of English 102, we were in an excellent position to evaluate the program's impact more formally.

Procedures

We designed our study to answer the following questions:

1. Does the Eng. 102 library instruction increase library skills and knowledge?
2. What library skills do college freshmen possess?
3. What do students want to learn most in the Eng. 102 library sessions?
4. Which student-perceived needs are we satisfying with this instruction?

The impact of the Eng. 102 sessions on student skills was evaluated

using a modified true experimental design. The fall composition students were given a test near the end of the semester in December after completing their two sessions of library instruction. At the start of the spring semester the students then enrolled in Eng. 102 took the same test. Because of random assignments to either semester, we assumed the two groups to be comparable. To measure what student-perceived needs were met and unmet, the fall Eng. 102 students were also given an ecosystem questionnaire for rating their instruction experience.

The tested population (N = approx. 1600) consisted primarily of freshmen. Composition professors were asked to administer the test at the end of the 28 fall classes and at the beginning of the 38 spring classes. Tests given after the second week of the spring semester were disallowed. The resulting return was 74%, 424 from the fall and 724 from the spring. 377 Ecosystem questionnaires were analyzed.

Measures

Skill Evaluation Test for Eng. 102 This 19-item multiple choice test was designed to measure the skills that supported the research assignment in Eng. 102, and it was based on the objectives of the library presentations and exercises. The objectives are that the students will be able to:

1. Use background material and other criteria to narrow topic.
2. Know several strategies for finding appropriate subject headings, including the use of LCSH.
3. Find at least 3 subject headings that pertain to their topic.
4. Locate and interpret a citation from Readers' Guide.
5. Find and use one other simple index to periodicals, locating and interpreting a citation for their topic.

6. Determine whether citations they find are available in Penfield Library, including a journal's availability on microfilm.

7. Apply what they have learned to their research paper.

Nine additional questions on the test concerned the frequency of library use both in college and in high school, and previous library instruction.

The Ecosystem Questionnaire This questionnaire, given to the fall group, measured student satisfaction with the library presentations and exercises. The questions pertained to the library program itself and how it helped with using specific library resources (including librarians). For each of the 12 items, students were asked to make two separate judgments using a five point scale. First they were asked to indicate how much they "received" from the program, and then how much they "desired" to receive.

Results and Discussion

The data from the Skills Evaluation Test compared the library skills of the fall students who received Eng. 102 library instruction with the spring students who had not yet had that instruction. The fall group's mean score was 14.0, significantly higher ($T = 21.63$, $P < .001$) than the spring group's mean score of 10.6. This test measure was a conservative one, since it shows a group difference in spite of the fact that 53% of the spring students had had other courses with specific library assignments, compared with only 16% of the fall students.

A discriminant analysis indicated which skill items were most influenced by instruction. Despite the fact that the fall students did make strong gains in library skills, they continued to score poorly on a small number of items. This feedback was used in making several changes: we clarified the confusing layout of the library's List of Periodical Holdings;

we worked towards a more uniform coverage of material among all of our library instructors; and our expectations of what we can and should teach became more realistic. One satisfying discovery was that the two questions that tested for application of knowledge rather than recall were among the test items which were the best discriminants.

A discriminant analysis of the ecosystem questionnaire allowed us to examine survey items for student satisfaction. The mean "desired" score was slightly higher than the mean "received" score, a common result with this type of survey. For 1/3 of the items, however, the differences were negligible (less than 0.20). The two test items with the closest "desired" and "received" mean scores were, happily, the items that stated what we consider to be our most important objective: a general orientation in the library that helps students get started on ther research papers. These same items also had the highest "desired" mean score, indicating that new students are indeed anxious to learn to use their college library.

What students were less satisfied with was the help the sessions gave them locating the materials they actually used in writing their research papers. To counter unrealistic expectations, we have learned to explain our objectives more accurately and to emphasize the time and work involved in the research process.

PSYCHOLOGY 290 EVALUATION

Psychology 290, Research Methods in Psychology, is a required course at SUNY/Oswego for psychology majors, minors, and concentrates. It is typically taken by students as second-semester sophomores or juniors. For the past seven years all five or six sections offered each semester have received 2 1/2 hours of library instruction.

Objectives of the library session are that students will be able to:

1. Identify annual reviews and handbooks as compilations of research to use to begin on a topic.
2. Recognize Psychological Abstracts as the most comprehensive source of psychological research and use it.
3. Use citation indexes and recognize when their use is called for.
4. Know when it's appropriate to have a computer search done.
5. Apply what they've learned to their research projects.

Four test-items were developed from these objectives and administered to students in Psychology 290 just before instruction and also at the end of the semester. Means were computed for each of the items. The test had no influence on their course grades, so it was a conservative measure of their knowledge.

Four sections completed both the pretest (77 respondents) and post-test (64 respondents). For the three questions on the pretest which related to the first three objectives above, there was an average per student of .2 correct answers. In addition, there were 44 responses which used Readers' Guide as an answer (the worst possible answer in each case). On the post-test, the number of correct answers on those three questions increased by six times. Only ten students used Readers' Guide as an answer.

Along with the pretest, students were also asked what they wanted covered in the library class session. A number of students wrote in that they knew nothing about the material the test covered, and that the library session should be concerned with this. Thus, the pretest also served to motivate students by signaling that the material covered in the library sessions would be quite different from that covered in their previous

library instruction.

Finally, students were asked along with the post-test for suggestions for future classes. There were a number of useful ideas, including one that the class (which has been taught using a search strategy model) be organized in the same way that the test was: given an information problem in psychology, how does one go about solving it.

While this was a simple measure using simple statistics, it gave valuable feedback. The pretest also helped to motivate students to learn new material. The value of the measure far outweighed the small amount of time required to create and administer it.

THE EXIT STUDY

Initially we hoped that we could assess the long term impact of the entire library instruction program on our students. While we haven't as yet directly assessed the library skills, knowledge, and attitudes of our graduating seniors and alumni, we have had the opportunity to obtain some feedback from our graduating students.

Process

In the spring of 1982, the coordinator of program evaluation for the revised general education program at Oswego initiated a four-year exit study which was designed to assess a random sample of our graduating seniors. The 1984 seniors were the first to graduate under the new requirements, including English 102. Part of the measurement included a questionnaire which was written to elicit student opinions about how much their Oswego experience contributed to their academic and intellectual development in a number of important areas of general education. One of the items on the questionnaire directly asked the students to evaluate their improvement in

the "ability to conduct research in a typical academic library." (It is very likely that a similar item will be included in an alumni survey instrument currently being developed at the College.) The questionnaire format required that the student make two separate judgments about each of the statements on the form. First they were to indicate how much improvement they obtained in a given area, and then they were to indicate how much they had desired to improve in that area through their Oswego experience. Additionally, the students were asked to explain their responses and make suggestions for improvement if their "obtained" and "desired" improvement ratings differed by two or more on the five point scale from "1...very little or none" to "5...a great deal."

Results and Discussion

The responses to the library item for the first two years of the study (1982 and 1983) have been analyzed and suggest some interesting preliminary inferences as we await future results. As is typical in the use of such a response format, the "obtained" ratings for the library item in both 1982 and 1983 were lower than the "desired" ratings. However, the difference in 1983 was considerably less than in 1982. In fact, a discriminant function analysis of the 1982 data (N=165) indicated that the library item was one which best discriminated between "obtained" and "desired" responses. The mean "obtained" rating (3.85 with a standard error of the mean of 0.099) was significantly lower than the mean for the "desired" ratings (4.13 with a standard error of 0.08). The 1983 discriminant analysis (N=207) indicated a smaller discrepancy between the "obtained" and "desired" ratings on the item. The "obtained" rating was 3.94 (standard error of the mean = 0.075) and the "desired" mean rating was 4.11 (standard error of the mean = 0.073).

A separate t-test ($t=-2.50$, $p=0.013$) suggests that this 1983 discrepancy, though small, is reliable.

It will be interesting to see if this apparent trend for the reduction of the disparity between "obtained" and "desired" improvement in this skill area is continued in future samples. Several students commented that they thought more library instruction should be required of students and that students should engage in more library research throughout their college career. The library reaches more students with instruction in the now-required freshman composition course (Eng. 102), and the expansion of its other instruction program components; this could contribute to even better matches between "obtained" and "desired" responses to the library item as the Exit Study continues.

CONCLUSION

Though serendipity and circumstances in Oswego's curriculum certainly helped, our evaluation program relied on resources and personnel strengths that exist on almost every college campus. The evaluation projects provided information about our library instruction program that we used to make improvements. The studies also revealed our library program's strengths, and they now constitute a basic foundation for continued evaluation. Our hope is that this case study encourages other librarians to mobilize similar efforts to evaluate and improve their instruction programs.